

**Notice of Allowability**

Application No.

09/977,793

Examiner

Willie Davis

Applicant(s)

AUSSCHNITT ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 27 August 2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 11 May 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 1-20 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art fails to disclose or make obvious a method or apparatus for determining overlay error in an integrated circuit made by a lithographic process comprising (1) the first measurement feature replicating a feature of the corresponding first layer active circuit feature selected from the group consisting of size, pitch and shape of the first layer active circuit feature and proximity of the first layer active circuit feature to any other structure and (2) the second measurement feature replicating a feature to the corresponding second layer active circuit feature selected from the group consisting of size, pitch and shape of the second layer active circuit feature and proximity of the second layer active circuit feature to any other structure and in combination with the other recited limitations of the claim.

Claims 2-7 are allowed by virtue of dependency on allowed claim 1.

Regarding claim 8, the prior art fails to disclose or make obvious a method or apparatus for determining overlay error in a desired direction in an integrated circuit made by a lithographic process comprising (1) the first measurement feature replicating a feature of the corresponding first layer active circuit feature selected from the group consisting of size, pitch and shape of the first layer circuit feature and proximity of the first layer active circuit feature to any other structure and (2) the second measurement feature replicating a feature of the corresponding

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second layer active circuit feature selected from the group consisting of size, pitch and shape of the second layer active circuit feature and proximity of the second layer active circuit feature to any other structure and in combination with the other recited limitations of the claim.

Claims 9-13 are allowed by virtue of dependency on allowed claim 8.

Regarding claim 14, the prior art fails to disclose or make obvious an integrated circuit wafer adapted to measure overlay error between layers made by a lithographic process comprising (1) the first measurement feature replicating a feature of the corresponding first layer active circuit feature selected from the group consisting of size, pitch and shape of the first layer active feature and proximity of the first layer active circuit feature to any other structure and (2) the second measurement feature replicating a feature of the corresponding second layer active circuit feature selected from the group consisting of size, pitch and shape of the second layer active circuit feature and proximity of the second layer circuit feature to any other structure and in combination with the other recited limitations of the claim.

Claims 15-20 are allowed by virtue of dependency on allowed claim 14.

New claims 21-24, 25-28 and 29-32 were eliminated since they are duplicates of allowed claims 4-7, 10-13 and 17-20, respectively.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie Davis whose telephone number is 571-272-1562. The examiner can normally be reached on 9:30am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2450. The fax phone numbers for the organization where this application or proceeding is assigned are 571-272-1562 for regular communications and 571-272-1562 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 272-272-2450.

*Willie Davis*

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May 18, 2004

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